UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/750,317	12/29/2000	Robert Walter Schreiber	52817.000123	6993

29315   7590   03/18/2003

MINTZ LEVIN COHN FERRIS GLOVSKY AND POPEO PC
12010 SUNSET HILL ROAD
SUITE 900
RESTON, VA   20190

EXAMINER
VEILLARD, JACQUES

ART UNIT	PAPER NUMBER
2175	

DATE MAILED: 03/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

Office Action Summary	Application No. 09/750,317	Applicant(s) Robert Schreiber
	Examiner JACQUES VEILLARD	Art Unit 2175

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ___3___ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *Dec 29, 2000* _____.

2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-40* _____ is/are pending in the application.

    4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-40* _____ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some* c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    *See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

    a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). *3, 8*

4) ☐ Interview Summary (PTO-413) Paper No(s). _____

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____

DETAILED ACTION

1.   This is in response to the Applicant's application filed on 12/29/2000.

2.   Claims 1-40 are presented for examination.

3.   Claims 1, 11, 21, and 31 are the independent claims. Other claims are the dependent

claims.

Information Disclosure Statement

4.   The information disclosure statement submitted on 1/23/2001(paper No. 3), and 2/5/2003

(Paper No. 8) was filed after the mailing date of the application on 12/29/2000. The submission

is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure

statement is being considered by the examiner.

Drawings

5.   This application has been filed with informal drawings which are acceptable for

examination purposes only. Formal drawings will be required when the application is allowed.

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth
> in section 102 of this title, if the differences between the subject matter sought to be patented and the prior

art are such that the subject matter as a whole would have been obvious at the time the invention was made
to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be
negatived by the manner in which the invention was made.

7.   Claims 1-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shibamiya et

al. (U. S. Pat. No. 4,956,774, hereinafter Shibamiya).

.   As per claims 1,11, 21, and 31, Shibamiya teaches a database method optimizer using

most frequency values statistics for statistical matching (See col.5, lines 3-7). Similarly, the

method taught by Shibamiya comprising the steps of: receiving a request for a first hierarchical

data list with a predetermined tolerance and indicating predetermined units (See Fig.1, elements

12, and 16, col.3, line 66 through col.4, line 5, and col.5, lines 11-14); searching at least one

object store for a second hierarchical data list (See col.2, lines 34-50, and col.25, line 52 through

col.26, line 10); determining whether the second hierarchical data list satisfies the request (See

col.6, lines 8-15, col.26, lines 11-47, and col.27, line 60 through col.28, line 2); and wherein the

step of determining comprises determining a first statistical curve for the first hierarchical data

list (See Fig.2, represents a histogram of the actual distribution index key values).

These passages of Shibamiya are not explicitly about hierarchial data. However,

Shibamiya teaches a method suggesting a B-tree for storing index's pages(See col.1, lines 64-67).

It would have been obvious for one ordinary skill in the art at the time of the invention to

modify the Applicant's teachings by the teachings of Shibamiya because Shibamiya provides an

optimizer estimation using mathematical formulas that require the statistical information as

input, wherein the calculation that the mathematical formulas define make certain assumption

about the interpretation of the statistical information in order to determine a statistical curve.

As per claims 2, 12, 22, and 32, Shibamiya teaches an optimizer database using most

frequent values statistics (See Fig.2, represents a histogram of the actual distribution index key

values, from these values a statistical curve can derive for as a second data list).

As per claims 3, 13, 23, and 33, Shibamiya teaches the claimed invention limitations,

wherein the step of determining whether the second hierarchical data list satisfies the request

comprises determining an overlap of the first statistical curve and the second statistical curve

(See col.28, lines 41-67 to col.29, lines 1-7). Shibamiya shows that there is an overlapping of

data between two tables T1 and T2.

As per claims 4, 14, 24, and 34, Shibamiya teaches the claimed invention limitations,

further comprising the step of converting the predetermined units to other units (See col.29, lines

9-32).

As per claims 5, 15, 25, and 35, Shibamiya teaches the claimed invention limitations,

further comprising the step of presenting the second hierarchical data list that satisfies the request

(See col.26, lines 11-47, and col.27, line 60 through col.28, line 2).

As per claims 6, 16, 26, and 36, Shibamiya teaches the claimed invention limitations, further comprising the step of presenting a match result notification (See col.2, lines 34-38, and col.5, lines 3-5).

As per claims 7, 17, 27, and 37, Shibamiya teaches the claimed invention limitations, further comprising the step of presenting a non-match result notification (See col.29, lines 60-67).

As per claims 8, 18, 28, and 38, Shibamiya teaches the claimed invention limitations, further comprising the step of indicating a closeness of the second hierarchical data list satisfying the request (See col.5, lines 3-7, and col.26, lines 16-19). Shibamiya shows by the percentage frequencies of occurrence how close is the matching that satisfies the request query.

As per claims 9, 19, 29, and 39, Shibamiya teaches the claimed invention limitations, wherein the statistical curve is based on a normal distribution (See Abstract, lines 10-13, and col.16, lines 61-62).

As per claims 10, 20, 30, and 40, Shibamiya teaches the claimed invention limitations, wherein the predetermined tolerance is set by a system administrator (See col.26, lines 21-27,

and col.29, lines 13-32). Shibamiya teaches a range of values equivalent to a tolerance of set of

values assuming entering by a human operator.

Other Prior Art Made of Record

8.   Parham   U. S. Pat. No. 5,805,860,

        Natarajan   U. S. Pat. No. 6,388,592,

        Conley et al.   U. S. Pat. No. 6,434,745,

        Arie Shoshani: Olap and statistical databases: similarities and difference, ACM, June 97,

pp. 185-196,

        Michael V. Mannino et al.: Statistical profile estimation in database systems, ACM,

vol.20, No.3, Sept.898, pp. 191-221,

        Wei Wang et al.: An approach to active spatial data mining based on statistical

information, IEEE, vol.12, No.5, Sept./oct.. 2000, pp. 715-728,

        Francesco M. Malvestuto: A universal scheme approach to statistical database containing

homogeneous summary tables, ACM, vol.18, No.4, Dec. 93, pp. 678-708.

Conclusion

9.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

10.   **Any response to this action should be mail to:**

Commissioner of Patent and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 746-7239 (for formal communication intended for entry)

Or:

(703) 746-7240 (for informal of draft communications, please label

"PROPOSED" or "DRAFT")

Hand - delivered responses should be brought to Crystal Park II, 2021 Crystal Drive, Arlington.

VA, Fourth Floor Lobby (Receptionist Telephone No. (703) 305-3900).

11.   Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Jacques Veillard whose telephone number is (703) 305-7094. The examiner

can normally be reached Monday through Friday from 9:30 AM to 4: 30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Dov Popovici, can be reached on (703) 305-3830. The fax phone number for this

group is (703) 308-5403.

HOSAIN T. ALAM
PRIMARY EXAMINER

Jacques Veillard

_____

Jacques Veillard
Patent Examiner TC 2100

March 7, 2003